McMinnville Municipal Airport Airport Layout Plan Report

Chapter Five

Airport Development Alternatives & Airport Layout Plans



CHAPTER FIVE AIRPORT DEVELOPMENT ALTERNATIVES & AIRPORT LAYOUT PLANS

INTRODUCTION

The evaluation of development options at MMV began with preparation of two preliminary landside development concepts designed to accommodate future landside facility needs (apron, hangars, terminal area, etc.) An airfield development option was also prepared that addressed proposed changes to the runway-taxiway system and an overview of potential access road locations. These preliminary concepts were presented to City staff, the planning advisory committee, FAA, ODA and the public for review and comment. The input provided by staff, the planning advisory committee, FAA and airport users led to refinements of the concept, which was then integrated into the airport layout plan as the preferred alternative.

As noted in the forecasts, demand for landside facilities (hangars, aircraft parking, associated facilities, etc.) within the current 20-year planning period is expected to be moderate. However, based on uncertainty associated with predicting future activity trends, it is recommended that facility development areas and reserves be identified to protect long-term development potential. In addition to protecting the viability of the airport, providing development reserves will enable the airport to accommodate unexpected surges in demand that may occur in the future.

The preliminary development options are presented as **Figure 5-1** through **Figure 5-3**. The updated set of airport layout plan drawings is presented with narrative descriptions later in this chapter. These reduced size drawings are for general reference only. Full-size scaled drawings are provided separately for formal review and comment.



DEVELOPMENT OPTIONS

<u>Airfield Development Options (Figure 5-1)</u>

The airfield improvement options include a reconfigured Runway 17/35 with a new taxiway system; optional airport access roadway alignments; and identification of a development reserve in the infield area between the runways. No improvements to Runway 4/22 or its parallel taxiway are proposed.

In this option, Runway 17/35 would be reconstructed at 3,600 by 75 feet with a new west-side parallel taxiway (1,800 feet) and new infield diagonal taxiway (1,300 feet) that connects to Taxiway A2, near the terminal apron. The existing 3,500-foot infield Taxiway D, which is currently closed, would be eliminated. The new infield taxiway connection would reduce taxiing distances required to reach the south end of Runway 17/35 and it would also allow future development within the infield. The reduced length of the runway was based on the runway's predominate use by light single-engine aircraft and gliders, and limited use by larger aircraft. At this length, the future access road to the airport's infield area can be located outside the runway protection zone for Runway 35.

The aviation and aviation related use development reserve located in the infield will be capable of accommodating a combination of aviation and non-aviation uses, including aircraft parking areas, hangars and airport industrial park development. It appears that the landside area north of Runway 4/22 will have adequate space to accommodate all forecast aviation-related development demands through the current 20-year planning period. However, the infield reserve provides a location for the City to consider development of compatible airport industrial facilities without consuming near-term aviation development areas. The infield reserve area would also provide a considerable amount of space for future aviation use development.

Based on preliminary discussions about potential changes in airport access from Highway 18, two options were depicted for future airport access roadway locations in the vicinity of the terminal area. Option 1 extends a new access road to the airport terminal area from west of the airport park, along the northern edge of airport property. This route would require some changes in existing airport developments and would limit aircraft access on the north side of the roadway. Option 2 extends a new south-side frontage road adjacent to Highway 18 (Three Mile Lane) from an existing roadway that serves the airport park and Evergreen facilities, traveling along the northern edge of the Evergreen complex. An internal airport access roadway is also depicted traveling around the east end of Runway 4/22, outside the runway safety area. This roadway is intended to provide access to future infield developments and the existing glider staging area. It



is assumed that Cruickshank Road will eventually be closed at Highway 18 and this (internal) roadway would replace the access that is eliminated by closure of the public road.

This option depicts a location near the end of Runway 22 to provide aircraft access (towed) to the Evergreen Air Museum. The access point is immediately adjacent to the parallel taxiway and Three Mile Lane. A short taxiway (or cleared path) would be required to allow aircraft to be towed to the highway before proceeding on the roadway. Evergreen currently tows aircraft across the roadway west of the terminal area, during low traffic hours. The road is temporarily closed to traffic with safety flag crews or police providing traffic control. However, maintaining a large clear area through the west hangar area reduces future development of additional hangars. This option provides the shortest route possible on airport property, which will allow other developable areas of the airport to accommodate new facilities. The increased tow distance and highway occupancy times may present logistical challenges, however, this option would be effective in preserving vital aircraft access to the museum.

Landside Option 1 (Figure 5-2)

This conceptual option identifies aviation development areas (hangars or apron) in the west hangar area and east of the terminal area. Development within the terminal area includes expansion of the terminal apron and an expansion reserve for the general aviation terminal building. The west end of the terminal area is identified for redevelopment to accommodate expanded terminal apron and improve the movement and parking options for larger business aircraft. Some of the older hangar located in this area would be removed or relocated to accommodate expanded parking apron.

Option 1 incorporates the west end airport access road (Option 1 in Figure 5-1). With this road alignment, the area northwest of the terminal would not be capable of accommodating a substantial amount of aircraft access. In this option, the area located northwest of the terminal area is identified as a non-aviation or aviation related commercial development area. With this road option, any taxiway crossing, such as the existing Evergreen taxiway would need to be gated on both sides of the new airport access road. While existing aircraft access can be maintained for limited use, it would not be suited for the frequent aircraft movement that would be associated with development of several new hangars. This option also requires removing the north end of one T-hangar to accommodate the roadway along the north end of the hangars.

The west hangar area would be expanded similarly to the existing configuration, with future T-hangars and limited conventional hangars. Upgraded taxiway access to the west hangar area is also proposed.



The proposed configuration of the east side aviation use area incorporates the entire land area available between Highway 18/Three Mile Lane and Taxiway A. The depth of this area would accommodate a variety of hangar and apron configurations that would extend from the existing tiedown apron and hangar. Additional taxiway connections would be required between the apron/hangar sites and Taxiway A. The east side development area appears to provide adequate capacity to accommodate forecast facility demands and additional development reserves.

Landside Option 2 (Figure 5-3)

This option retains the development concept for the west hangar area contained in Option 1, although the primary airport access would continue to be provided via Cirrus Avenue. Upgraded vehicle access to the west hangar area would be provided through a short road extension from the road serving the airport park.

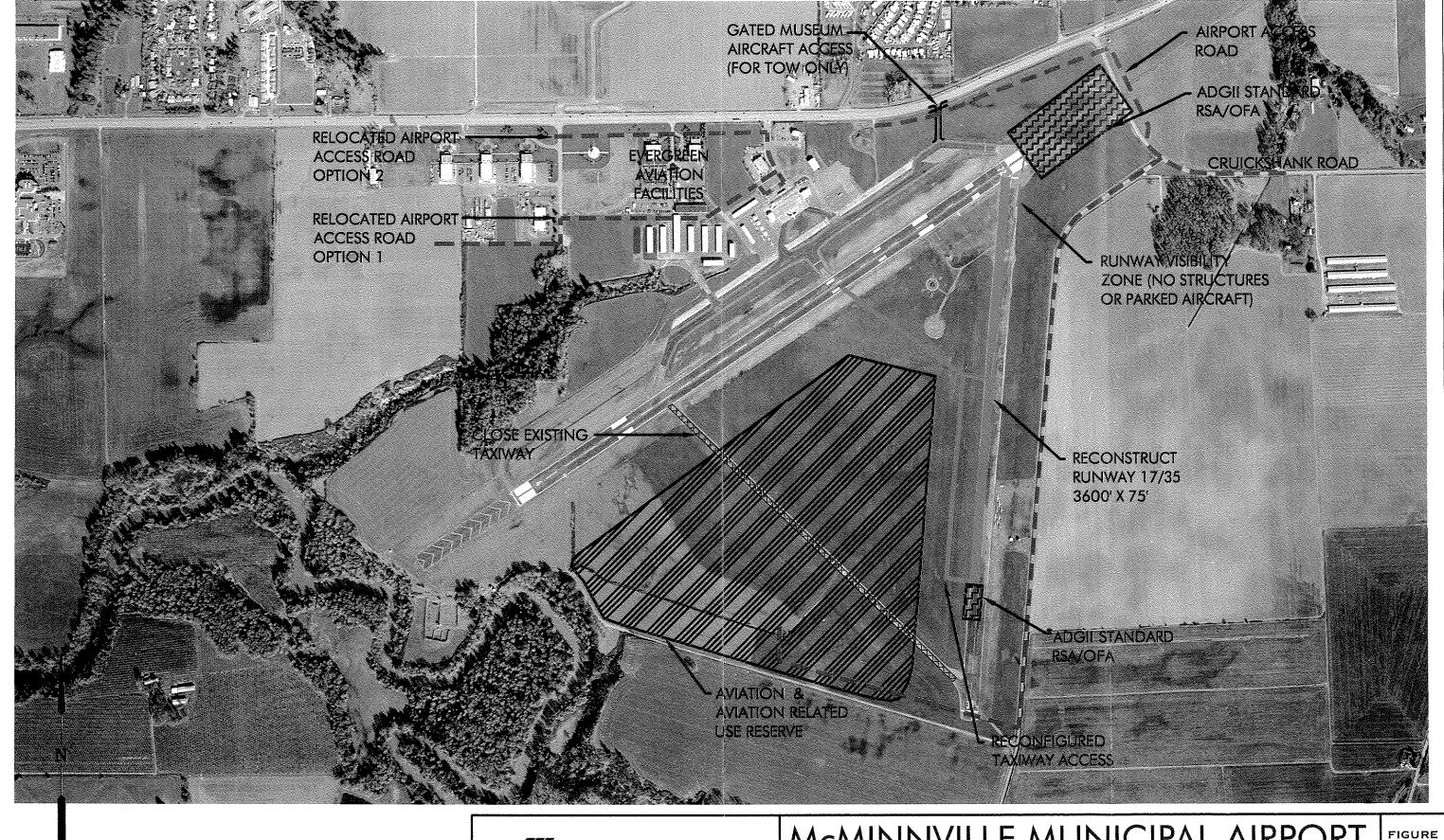
With primary airport access being maintained at the north edge of the airport, the development of aviation-related facilities can be accommodated in the area northwest of the terminal area (corporate hangar area). The existing taxiway access located along the west edge of the terminal would be upgraded to accommodate large aircraft, based on ADG II design standards. To accomplish this however, two buildings located near the west edge of the terminal apron would need to be removed to provide required taxiway obstruction clearances. To improve aircraft movement, additional taxiway/taxilane improvements are also identified for the north side of several T-hangars located in the west hangar area.

A new airport access road alignment is depicted along the south edge of Three Mile Lane, located on Evergreen property. This road option would be considered only if the existing Cirrus Avenue connection to Three Mile Lane was eliminated as part of a future highway reconfiguration. As noted earlier, an alternative west access road alignment is depicted in Option 1. Since the access road would require use of Evergreen property, there may be options available to trade access road right-of-way or an easement in exchange for a hangar development site in the designated corporate hangar area.

The proposed configuration of the east side aviation use facilities is slightly different in this option, with a more linear development of apron and hangar areas adjacent to Taxiway A. The existing east tiedown apron would be extended along the parallel taxiway, with conventional hangar sites located along the back edge of the apron. Additional access taxiway connections would be required between the apron and Taxiway A. As with Option 1, the east side development area in this option appears to provide adequate capacity to accommodate forecast facility demands and additional development reserves.



An area of non-aviation or aviation related commercial development is proposed along the eastern edge of Cirrus Avenue, extending along the north edge of the proposed hangar development area. Based on the configuration of existing and future access roads and future hangar development concepts, this land area would not be well suited to accommodate aircraft access or related aviation uses. In this option, a new internal access road would extend east from Cirrus Avenue to serve the new east side aviation facilities.



SCALE: 1"=800'

SOURCE: BERGMAN PHOTOGRAPHIC SERVICES, INC. (2/02)



McMINNVILLE MUNICIPAL AIRPORT
AIRFIELD DEVELOPMENT OPTIONS

FIGURE 5-1



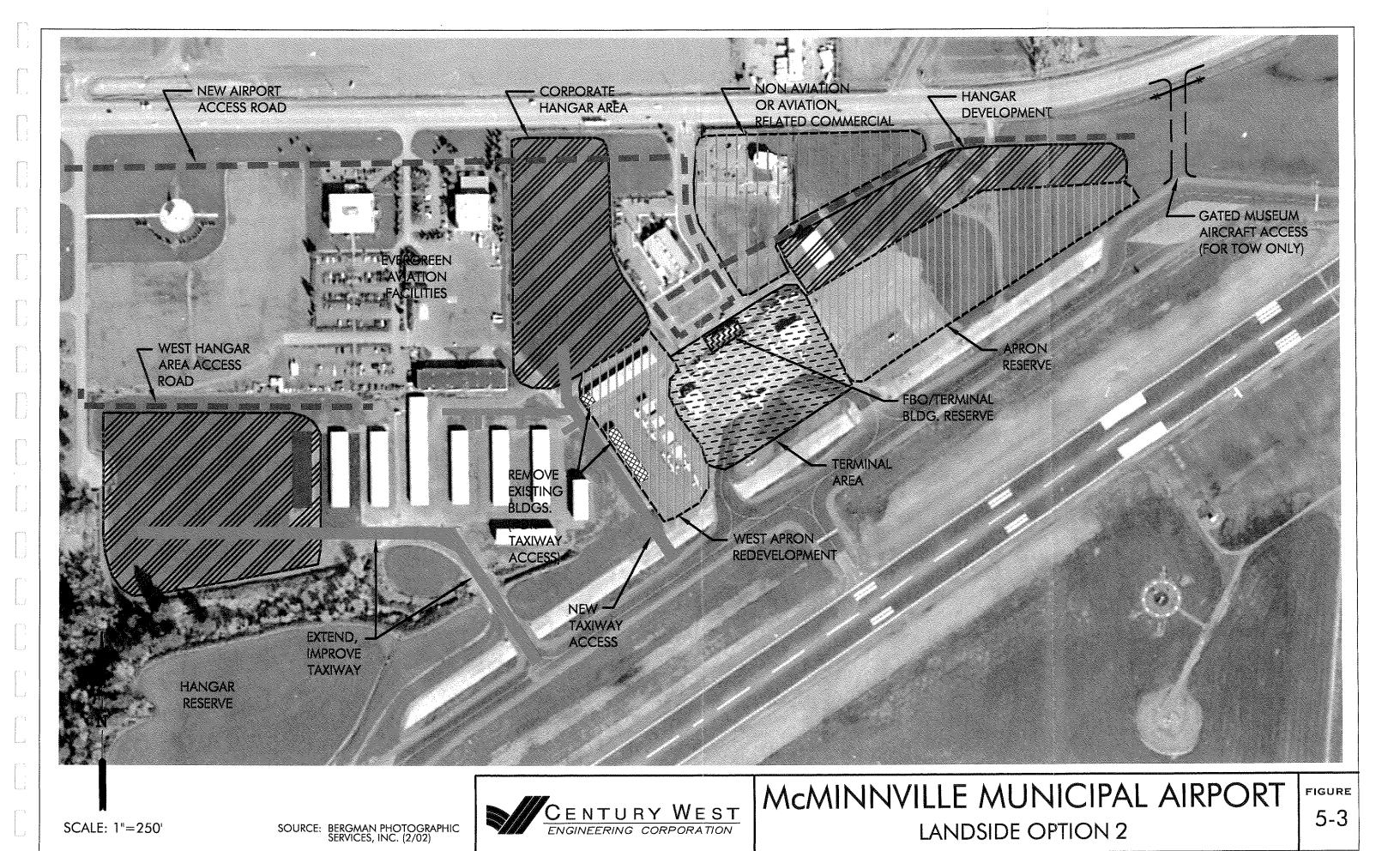
SCALE: 1"=250'

SOURCE: BERGMAN PHOTOGRAPHIC SERVICES, INC. (2/02)



McMINNVILLE MUNICIPAL AIRPORT LANDSIDE OPTION 1

FIGURE 5-2





ALTERNATIVES SUMMARY

Based on the review of the preliminary alternative concepts, the planning advisory committee and City staff identified several items to be incorporated into a preferred alternative. There was a strong preference expressed to maintain north-side airport access via Cirrus Avenue and, if required, through a future frontage road along Three Mile Lane. An extended discussion was held regarding the planned reconfiguration of Highway 18 along the airport. Through this discussion, it became evident that the specifics of the highway project have not yet progressed to a point where potential changes to existing airport access can be determined. Therefore, for the purposes of the master plan update, it is assumed that the Cirrus Avenue connection to Three Mile Lane will be maintained through the current planning period. A reserve will be identified to develop an alternative airport frontage road connection that could be integrated into an eventual highway design.

During its review of the preliminary alternative, the FAA commented that Runway 17/35 should be maintained with the greatest length possible in order accommodate large aircraft operations. Since Runway 4/22 does not provide sufficient wind coverage to meet the FAA-recommended 95 percent threshold, Runway 17/35 should be capable of accommodating large aircraft during strong crosswind conditions. Based on this information, the length of Runway 17/35 will be determined once standard B-II runway safety area, object free area, and approach surface obstruction clearance is provided at the Runway 35 end.

The general consensus among reviewers was that the west hangar area should be expanded as needed to accommodate future T-hangar demand. Developing a corporate hangar area northwest of the terminal area was retained as a long-term option. Redevelopment within the terminal area would be based on the need to expand the terminal apron. A development reserve for a new general aviation terminal will be located along the back edge of the terminal apron; a reconfiguration of the existing access road may also be required, depending on the configuration of the building and vehicle parking areas. The area east of the terminal apron will be developed and reserved to accommodate future general aviation apron and conventional hangars.

The Consultants were directed by City staff, at the request of the planning advisory committee, to meet with Evergreen to discuss their existing and future airport development needs. On January 29, 2004, David Miller and Aron Faegre met with Mr. Del Smith, founder and Chief Executive Officer of Evergreen, and several other senior Evergreen staff to discuss the company's airport facility needs and long-term plans for both the company and the air museum. Evergreen expressed an interest in developing a new hangar on their property with taxiway access provided near the end of the west hangar area and maintaining a means to move aircraft between the



airport and museum, when required. This information was conveyed to City staff for their review. After reviewing the information, staff directed that no additional through-the-fence access would be provided or incorporated into the ALP. However, a subsequent proposal made by Evergreen in late Summer 2004 to contribute private funds toward airport development costs, prompted reconsideration of the issue. By Fall 2004, the City, Evergreen and the FAA were in general agreement that the proposal, which includes new taxiway access to a planned Evergreen G-IV hangar and a substantial private financial contribution, would be beneficial to the airport. Only portions of the improvements located within airport property will be eligible for FAA funding. This project is an excellent example of an effective public-private partnership that creates significant benefits for all involved. Preliminary engineering and environmental planning work is scheduled for 2005.

Based on all comments provided, the input was incorporated into the airport layout plan drawing. The preliminary conceptual development options presented in this chapter illustrate the progressive process of alternatives evaluation and do not necessarily reflect the final preferred configuration of facilities depicted on the airport layout plan that resulted from the overall review process. Additional detail has been added to the ALP drawing for future aircraft apron, hangar and access road configurations. The set of airport layout plan drawings is presented at the end of this chapter.

AIRPORT LAYOUT PLAN DRAWINGS

The options that were considered for the long-term development of MMV were described in the Alternatives section of this chapter. This evaluation resulted in the selection of a preferred alternative. The preferred alternative has been incorporated into the airport layout plan drawings, which are summarized in this section. The set of airport plans, which is referred to in aggregate as the "Airport Layout Plan" (ALP) has been prepared in accordance with FAA guidelines. The drawings illustrate existing conditions, recommended changes in airfield facilities, existing and recommended property ownership, land use, and obstruction removal. The ALP set is presented at the end of this chapter:

- Drawing 1 Cover Sheet
- Drawing 2 Data Sheet and Airport Terminal Area
- Drawing 3 Airport Layout Plan
- Drawing 4 FAR Part 77 Airspace Plan



- Drawing 5 Runway 4 Approach Surface Plan & Profile
- Drawing 6 Runway 22 Approach Surface Plan & Profile
- Drawing 7 Runway 17/35 Approach Surface Plan & Profile
- Drawing 8 Airport Land Use Plan with 2022 Noise Contours

Cover Sheet

The cover sheet includes an airport location map, an airport vicinity map, an index for the drawing set, and related project information.

Data Sheet/Airport Terminal Area Plan

The data sheet provides existing and future data blocks for the overall airport and for each runway. In addition, a declared distances table, legend of symbols and line types, and building/facility table (with corresponding numbers depicted on the airport layout plan drawing and terminal area insert) are provided.

Since the project scope did not provide for a separate terminal area plan, an insert detailing the terminal area was added to this sheet. This insert depicts the recommended improvements within the terminal area that are presented on the ALP, but at larger scale. The terminal area improvements include a realignment of the airport access road, expansion of the FBO building, future hangar development, and development of aviation-related facilities in areas without aircraft access.

Airport Layout Plan

The Airport Layout Plan (ALP) presents the existing and ultimate airport layout and depicts the improvements that are recommended to enable the airport to meet forecast aviation demand. The improvements depicted on the ALP reflect all major airfield developments recommended in the twenty-year planning period. Decisions made by the airport sponsor regarding the actual scheduling of projects will be based on specific demand and the availability of funding. Long-term development reserves are also identified on the ALP to accommodate potential demand that could exceed current expectations or could occur beyond the current twenty-year planning



period. The major improvements depicted on the ALP are summarized below (note: the terminal area detail on Sheet 2 also depicts the terminal area improvements):

- The ALP depicts Runway 17/35 with a future length of 4,430 feet. The runway would be narrowed from 150 feet to 75 feet during reconstruction based on B-II design standards.
- A new infield taxiway and partial-length parallel taxiway is recommended on the west side of Runway 17/35, with a 240-foot B-II runway separation. All new taxiways are 35 feet wide.
- Taxiway D (existing infield taxiway) will be permanently closed.
- The existing light aircraft tiedowns on the east tiedown apron are depicted with a recommended reconfiguration to correct a conflict with transitional surface penetrations created by prior planning to locate parking positions on the edge of the primary surface.
- An aviation and non-aviation use development area is depicted in the infield area between the two runways.
- The area surrounding the existing general aviation terminal/FBO building is reserved to accommodate a larger replacement GA Terminal/FBO building.
- Recommended changes in the terminal area access road and vehicle parking areas are depicted.
- Upgraded fencing with limited access points is recommended along the airport perimeter.
- Future development of landside facilities is located on north side of Runway 4/22; the west T-hangar area, the terminal area and the area east of the terminal area.
- The area located northwest of the terminal area is identified as an aviation development reserve.
- A new taxiway connection to the west hangar area that connects to Taxiway A

Projects such as maintenance or reconstruction of airfield pavements, which are not depicted on the ALP, are described in the Capital Improvements Program, in **Chapter Six**.



Airspace Plan

The FAR Part 77 Airspace Plan for MMV was developed based on Federal Aviation Regulations (FAR) Part 77, Objects Affecting Navigable Airspace. The Airspace Plan provides the plan view of the airspace surfaces, profile views of the runway approach surfaces, and a detailed plan view of the runway approach surfaces. This information is intended to define and protect the airspace surfaces from encroachment due to incompatible land uses, which could adversely affect safe airport operations. By comparing the elevations of the airspace surfaces with the surrounding terrain, an evaluation of potential obstructions to navigable airspace was conducted. Additional plan and profile detail for each runway is provided on separate drawings (see Drawings 5, 6, 7).

The airspace surfaces depicted for MMV reflect the ALP-recommended (ultimate) runway lengths of 5,420 feet for Runway 4/22 and 4,330 feet for Runway 17/35. Both runways are designed for use by aircraft weighing more than 12,500 pounds, which places it in the "other than utility" category under FAR Part 77. Runway 22 has precision instrument approach capabilities and Runway 4 is planned for non-precision instrument. The airspace associated with Runway 17/35 depicts the existing visual approach capabilities. A 10,000-foot horizontal surface radius is used for each runway end to protect existing and potential future instrument approach capabilities.

There are no areas of terrain penetration identified within any of the airspace surfaces. However, there are numerous trees located in the approach surfaces for Runways 4 and 22 and the transitional surface. It is recommended that trees be topped or eliminated completely; other fixed obstructions (buildings, etc.) that cannot be relocated should be marked with obstruction lighting.

Runway 22 Approach Surface Plan & Profile

The approach surface plan and profile drawing provides additional detail for the runway approach and the runway protection zone. The existing and future 50:1/40:1 precision instrument approach surface is depicted. There are no terrain penetrations within the approach surface, although numerous trees are located off airport property, within the inner 6,000 feet of the surface.



Runway 4 Approach Surface Plan & Profile

The approach surface plan and profile drawing provides additional detail for the runway approach and the runway protection zone. The existing and future 34:1 non-precision instrument approach surface is depicted. There are no terrain penetrations within the approach surface, although two trees are located off airport property, within the inner 3,000 feet of the surface.

Runway 17/35 Approach Surface Plan & Profile

The approach surface plan and profile drawing provides additional detail for the runway approaches and the runway protection zones based on the future runway configuration. 20:1 visual approach surfaces are depicted. There are no terrain penetrations or other obstructions identified within the approach surfaces.

Airport Land Use Plan with 2022 Noise Contours

The Airport Land Use Plan for MMV depicts existing zoning in the immediate vicinity of the airport. The area surrounding the airport is predominately zoned agricultural or industrial although areas of residential zoning are also located north of the airport. The urban areas within McMinnville's city limits are located northwest of the airport and include a full range of residential, manufacturing, commercial and agricultural zoning.

Noise exposure contours based on the 2022 forecasts of aircraft activity are depicted on the Land Use Plan. The noise contours were created using the FAA's Integrated Noise Model (INM). Data from activity forecasts and aircraft fleet mix are combined with common flight tracks and runway use to create a general indication of airport-generated noise exposure. The noise contours depicted on the Airport Land Use Plan are plotted in 5 DNL increments starting at 55 DNL. The size and shape of the contours are consistent with the airport's business jet runway utilization on the primary runway and lower volumes of aircraft traffic on the secondary runway. The location of the airport, approximately two miles southeast of the main urban areas of McMinnville, combined with the alignment of the airport's two runways, results in the extended centerlines for all runway ends avoiding large concentrations of population. The City of Dayton is located along the extended centerline of Runway 22, nearly two miles northeast of the runway end, well beyond the limits of the 2022 55 DNL contour.

The 2022 55 DNL noise contour extends approximately 9,200 feet beyond the end of Runway 22 over mostly agricultural lands located along Highway 18; and approximately 9,300 feet beyond the threshold for Runway 4 in sparsely developed areas along the Yamhill River. A portion of

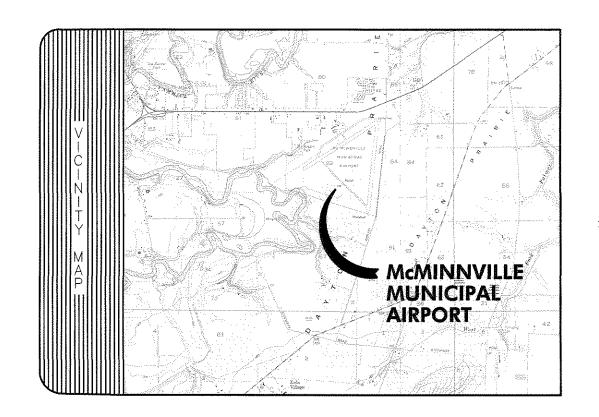


the 55DNL also extends over the north side of Highway 18 (Three Mile Lane) from Cirrus Avenue east, including the residential areas located north of Runway 17/35. The 55 DNL noise contour associated with Runway 17/35 is largely contained within airport property, except along the east side of the runway, where the contour extends 400 to 500 feet east of the airport boundary, east of the county road that connects to Cruickshank Road. Noise exposure at the north end of Runway 17/35 is largely overshadowed by Runway 4/22 activity, although a slight bump out in the 55, 60, 65 and 70 DNL contours is visible near the end of Runway 17. Portions of the 60 DNL contour also extend beyond airport property in largely unpopulated areas beyond the ends of Runway 4 and 22 and along the east side of Runway 17/35.

The 2022 65 DNL noise contours for both runways are contained almost entirely contained within airport property. Small areas of 65 DNL contour extend beyond the airport boundary near the end of Runway 35 and approximately 1,000 to 1,500 feet beyond the airport boundary, along the extended centerline of Runway 4 over generally unpopulated agricultural or rural lands. A discontinuous 65 DNL contour, approximately 2,800 feet long, appears at the Runway 35 threshold that is not connected to the contour located along Runway 4/22 and the end of Runway 17. This area of noise exposure would be attributed to takeoff and landing operations on Runway 17.

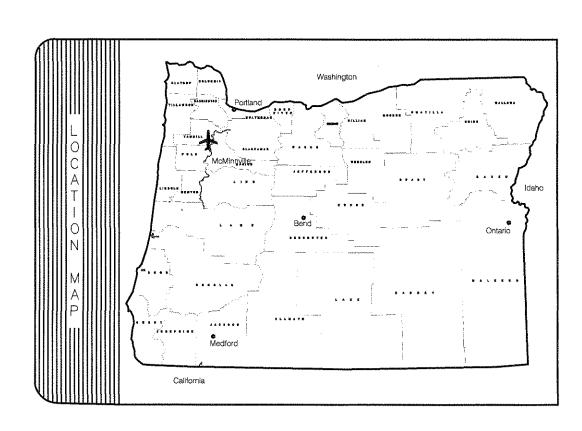
70 DNL noise contours for both runways are contained within airport property boundaries. As with the 65DNL, a discontinuous 70 DNL contour, approximately 1,500 feet long, appears at the Runway 35 threshold.

The sparsely developed land uses in the vicinity of the airport suggest that noise compatibility will not be a significant issue during the planning period. However, since perceived noise impacts are not generally limited to areas with significant levels of noise, care should be taken by local land use authorities to avoid creating potential long-term land use incompatibilities in the vicinity of the airport by permitting development of incompatible land uses such as residential subdivisions. A detailed description of airport noise and land use compatibility is presented in **Chapter Seven**.



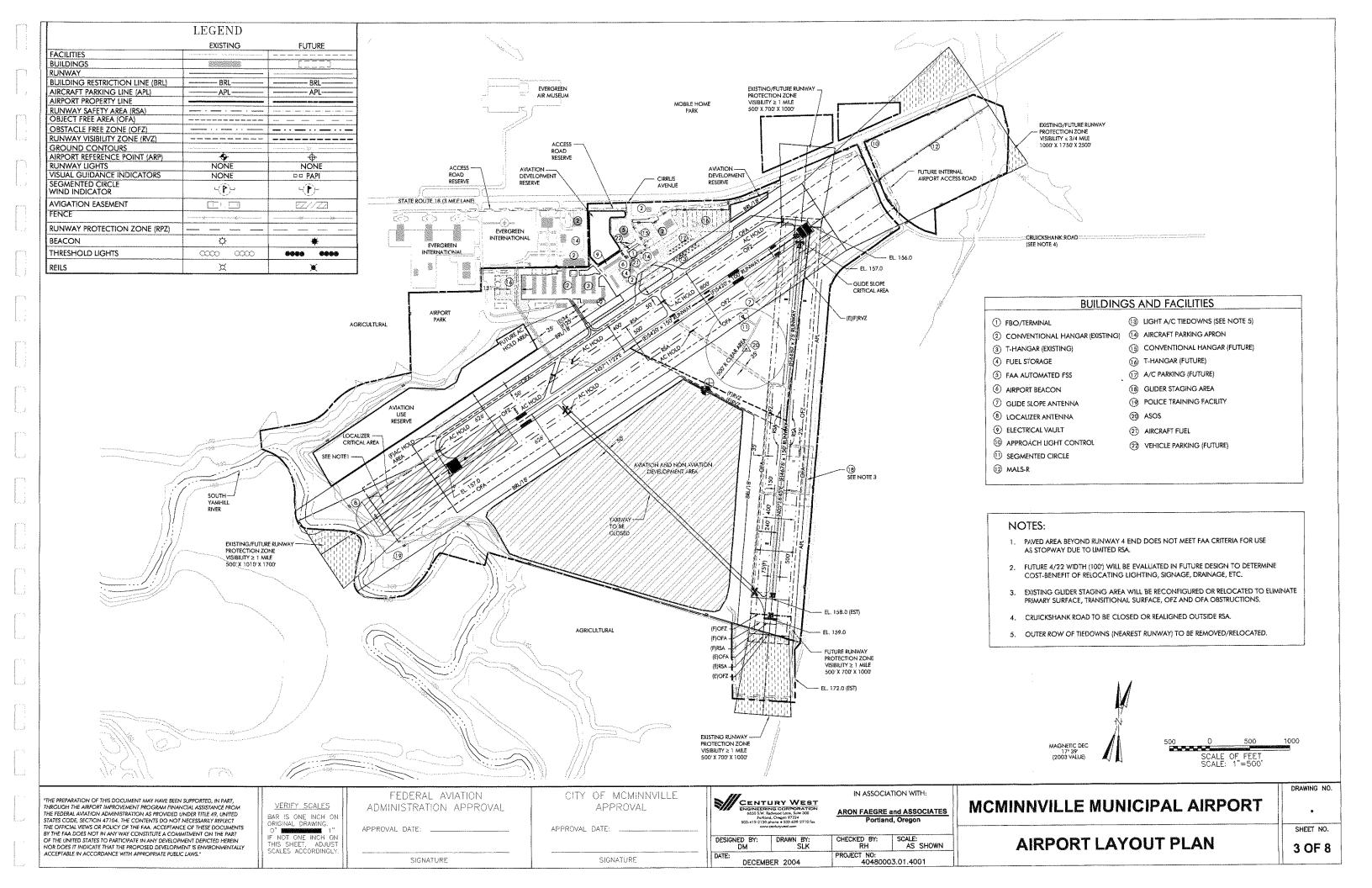
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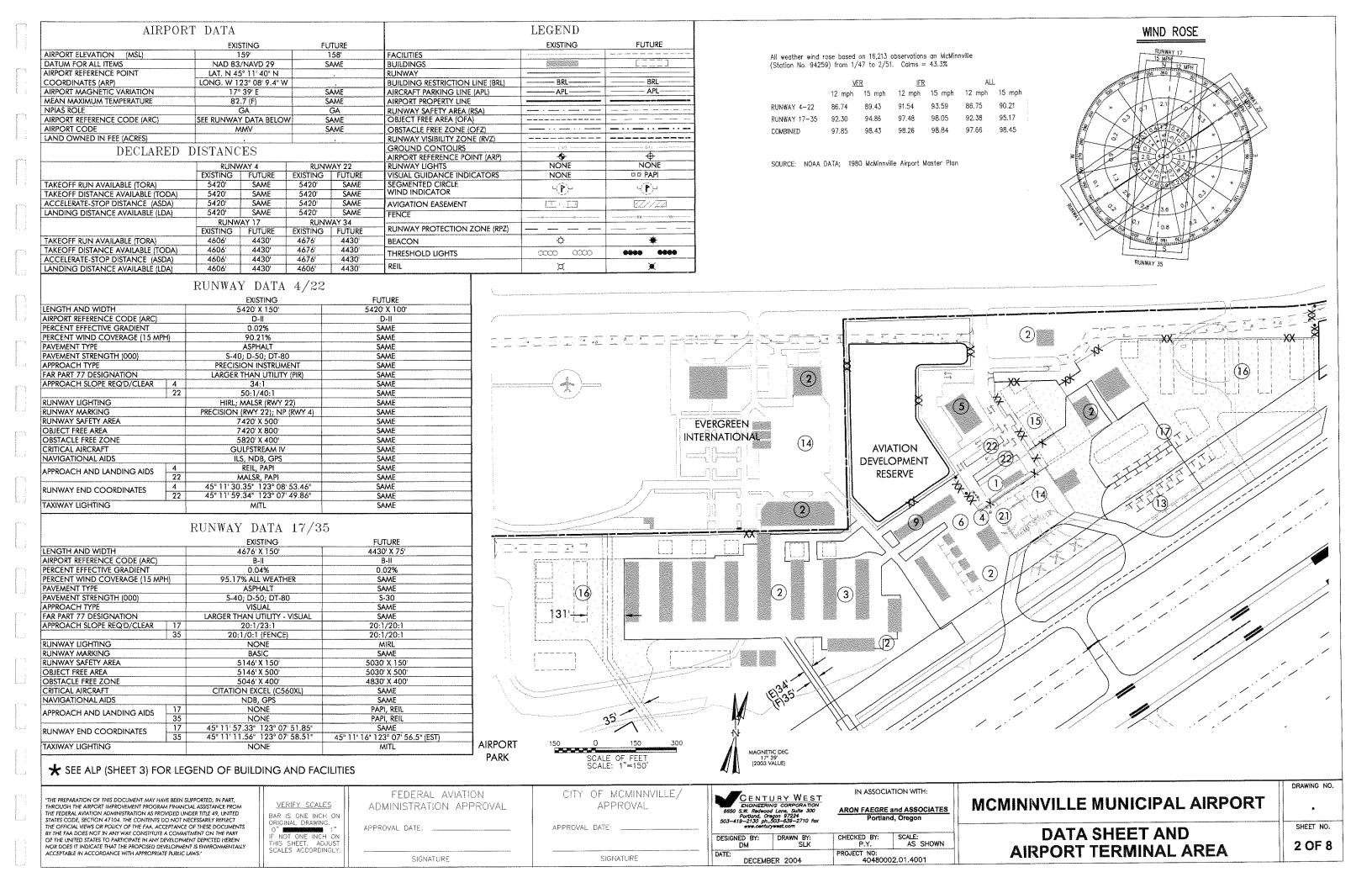
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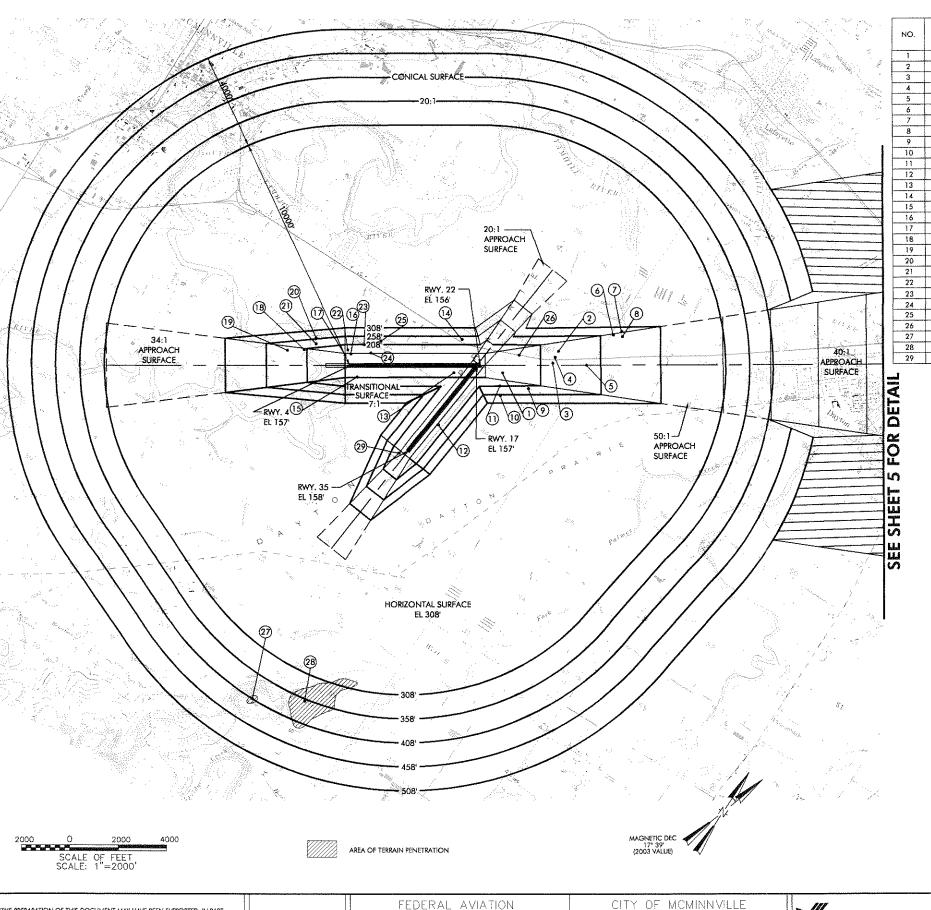


SHEET SHEET CONTENTS 1 COVER SHEET 2 DATA SHEET 3 AIRPORT LAYOUT PLAN 4 AIRSPACE PLAN 5 RUNWAY 4 APPROACH SURFACE PLAN & PROFILE 6 RUNWAY 22 APPROACH SURFACE PLAN & PROFILE 7 RUNWAY 17/35 APPROACH SURFACE PLAN & PROFILE 8 AIRPORT LAND USE PLAN WITH 2022 NOISE CONTOURS









			MSL	DISTANCE	DISTANCE	AMOUNT OF	AIRPORT	
NO.	ITEM	PART 77 SURFACE	ELEV	FROM RWY	FROM RWY	PENETRATION	PROPERTY	DISPOSITION
				· CL	END	(ESTIMATED)		
1	ROAD	APPROACH (22)	170'	. 0'	1030	0'	NO	NO OBSTRUCTION; REFERENCE ONLY
2	TREE	APPROACH (22)	202'	600'	2250'	5'	NO	TOP/REMOVE
3	TREE	APPROACH (22)	226'	80'	3010'	14'	NO	TOP/REMOVE
4	TREE	APPROACH (22)	246'	330'	3110'	32'	NO	TOP/REMOVE
5	TREE	APPROACH (22)	225'	0'	4420'	o.*	NO	TOP/REMOVE
6	TREE	TRANSITIONAL	318'	1250'	5550 ^t	55 ⁱ	NO	TOP/REMOVE
7	TREE	TRANSITIONAL	339'	1400	5900'	69'	NO	TOP/REMOVE
8	TREE	APPROACH (22)	319'	1200'	5930'	48'	NO	TOP/REMOVE
9	TREE	TRANSITIONAL.	257'	980'	2000'	26'	NO	TOP/REMOVE
10	TREE	TRANSITIONAL	252'	1250'	810'	0, 🗡	NO	TOP/REMOVE
11	TREE	TRANSITIONAL	2131	850'	800'	5'	NO	TOP/REMOVE
12	BUILDING	TRANSITIONAL	176'	300'	-3150 (17)	11'	YES	OBSTRUCTION; LIGHT
13	ROD ON GLIDE SLOPE (OL)	PRIMARY (4/22)	2041	300'	-1100 (22)	47'	YES	NONE
14	TREE	TRANSITIONAL	2561	1080'	-750 (22)	23'	NO	TOP/REMOVE
15	BUSH	PRIMARY (4/22)	164'	480'	-290 (4)	7'	YES	REMOVE
16	TREE	PRIMARY (4/22)	178	480'	-50 (4)	14'	YES	TOP/REMOVE
17	ROD ON ELECTRIC BOX	APPROACH (4)	163'	430'	205'	6'	YES	NONE
18	TREE	APPROACH (4)	231'	650'	1900'	24'	NO	TOP/REMOVE
19	TREE	APPROACH (4)	246'	630'	2600°	18'	NO	TOP/REMOVE
20	TREE	TRANSITIONAL	269'	1150'	1400'	4'	YES	TOP/REMOVE
21	TREE	TRANSITIONAL	250'	900 ¹	1400'	17'	YES	TOP/REMOVE
22	TREE	TRANSITIONAL	226'	. 650'	80'	48 ^t	YES	TOP/REMOVE
23	TREE	TRANSITIONAL	248'	. 880'	-600 (4)	40'	YES	TOP/REMOVE
24	TREE	TRANSITIONAL	191'	520'	-880 (4)	31'	YES	TOP/REMOVE
25	TREE	TRANSITIONAL	250°	1020'	-1300 (4)	19'	YES	TOP/REMOVE
26	ROAD	APPROACH (22)	172'	600'	1000'	0,	NO	NO OBSTRUCTION; REFERENCE ON
27	TERRAIN	CONICAL	416'	13900'	3800' [4]	8,	NO	NONE
28	TERRAIN	HORIZONTAL	345	13200	0' (4)	37'	NO	NONE
29	FENCE	PRIMARY	162'	250'	295' (35)	3,	YES	RUNWAY RECONFIGURATION *

NOTES:

- * TREE ITEM ELEVATIONS (SURVEYED 1992) DID NOT PENETRATE SURFACE; SHOULD BE SURVEYED TO DETERMINE CURRENT OBSTRUCTION HEIGHT DUE TO GROWTH.
- OBSTRUCTION DATA OBTAINED FROM AIRPORT OBSTRUCTION CHART (OC), PUBLISHED BY NATIONAL OCEAN SERVICE (NOS), FEBRUARY 1993 AND TREE REMOVAL PROJECT (2002) WITHIN RUNWAY 4 AND 22.
- *FENCE LOCATED AT THE END OF RUNWAY 35 WILL BE RELOCATED IN FUTURE TO ELIMINATE OBSTRUCTION; RUNWAY 35 END TO BE RELOCATED AS PART OF FUTURE RUNWAY REHABILITATION PROJECT TO REDUCE FENCE OBSTRUCTION ALONG CURRENT AIRPORT PROPERTY LINE.

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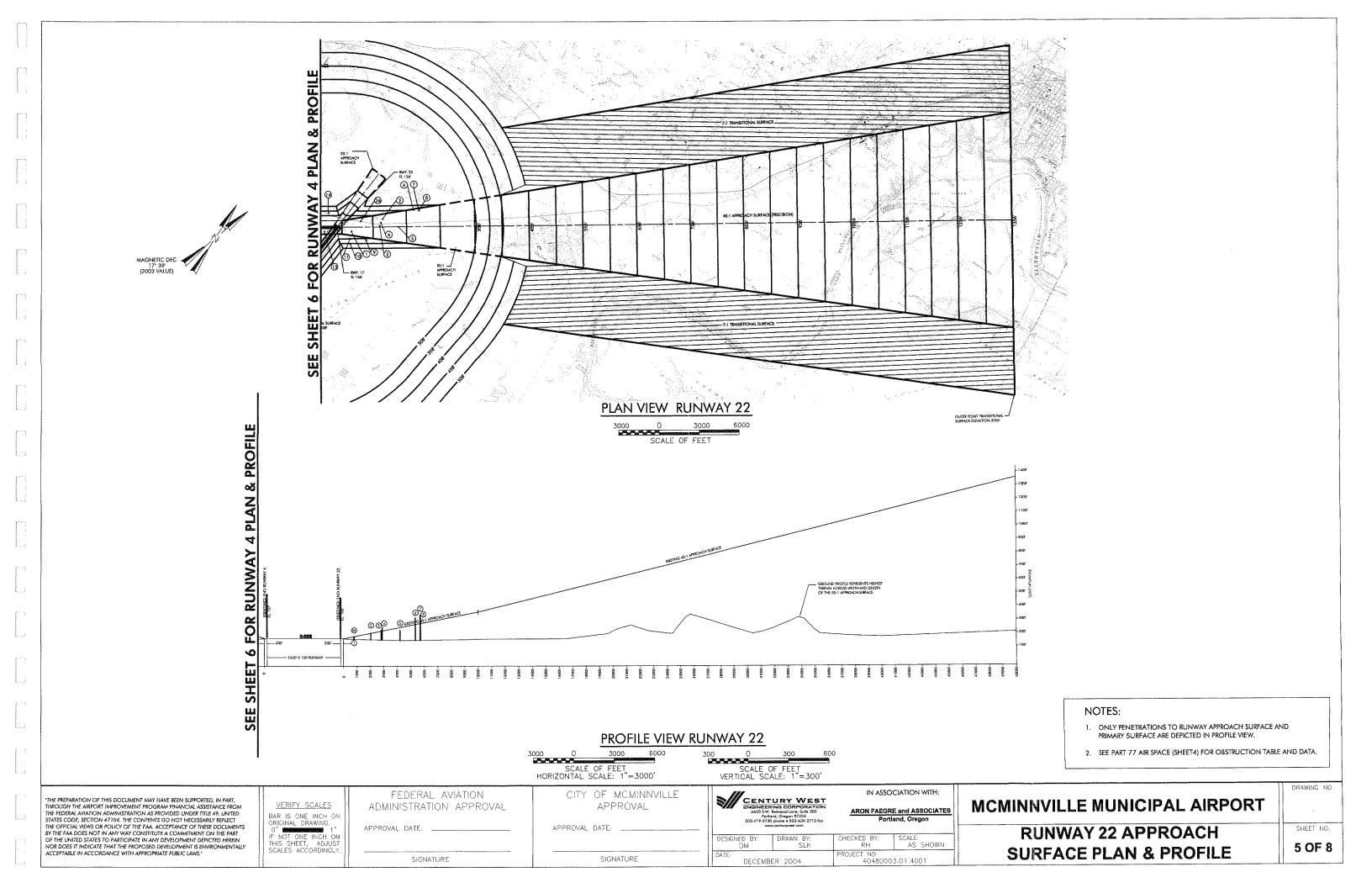
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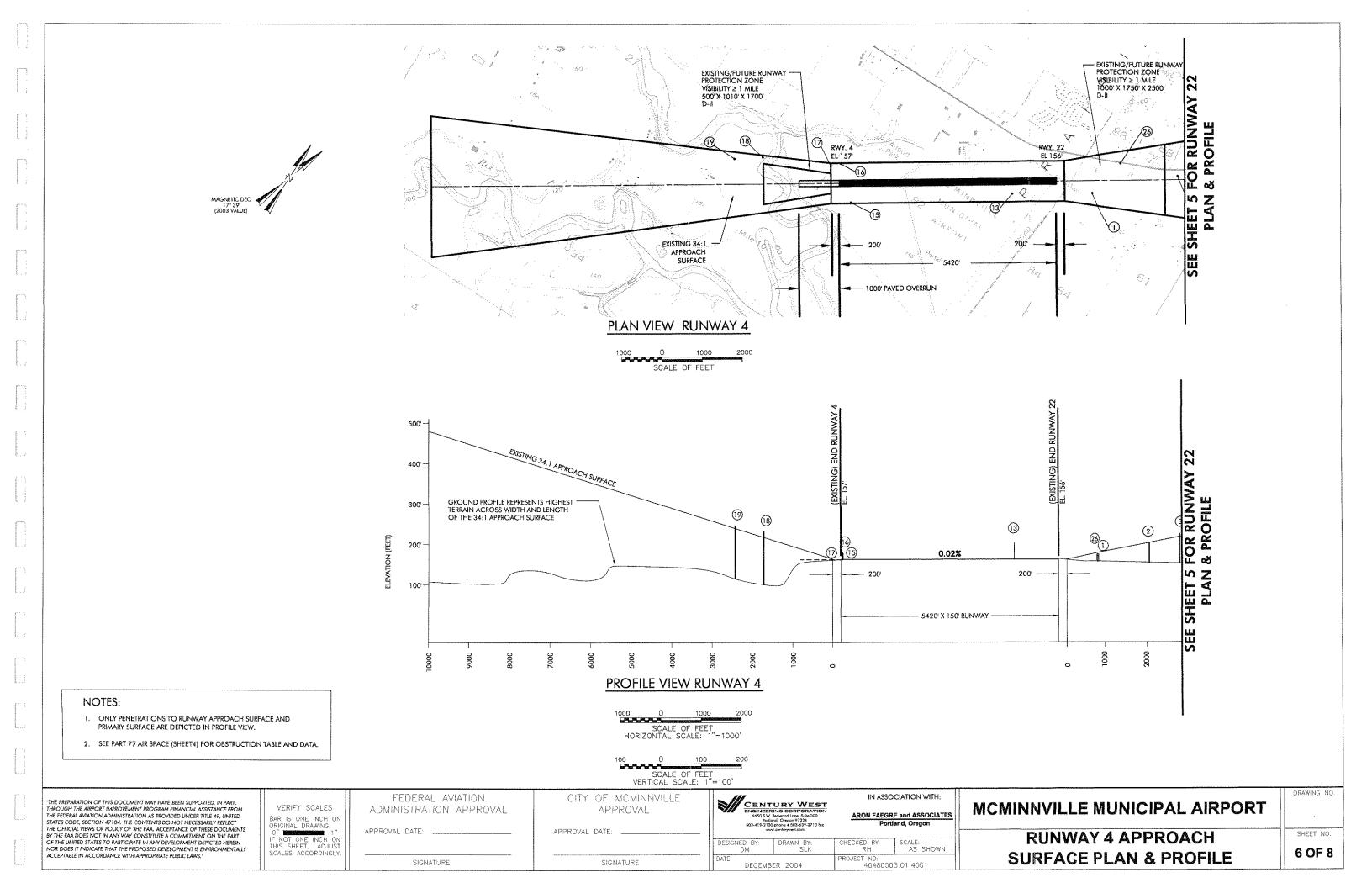
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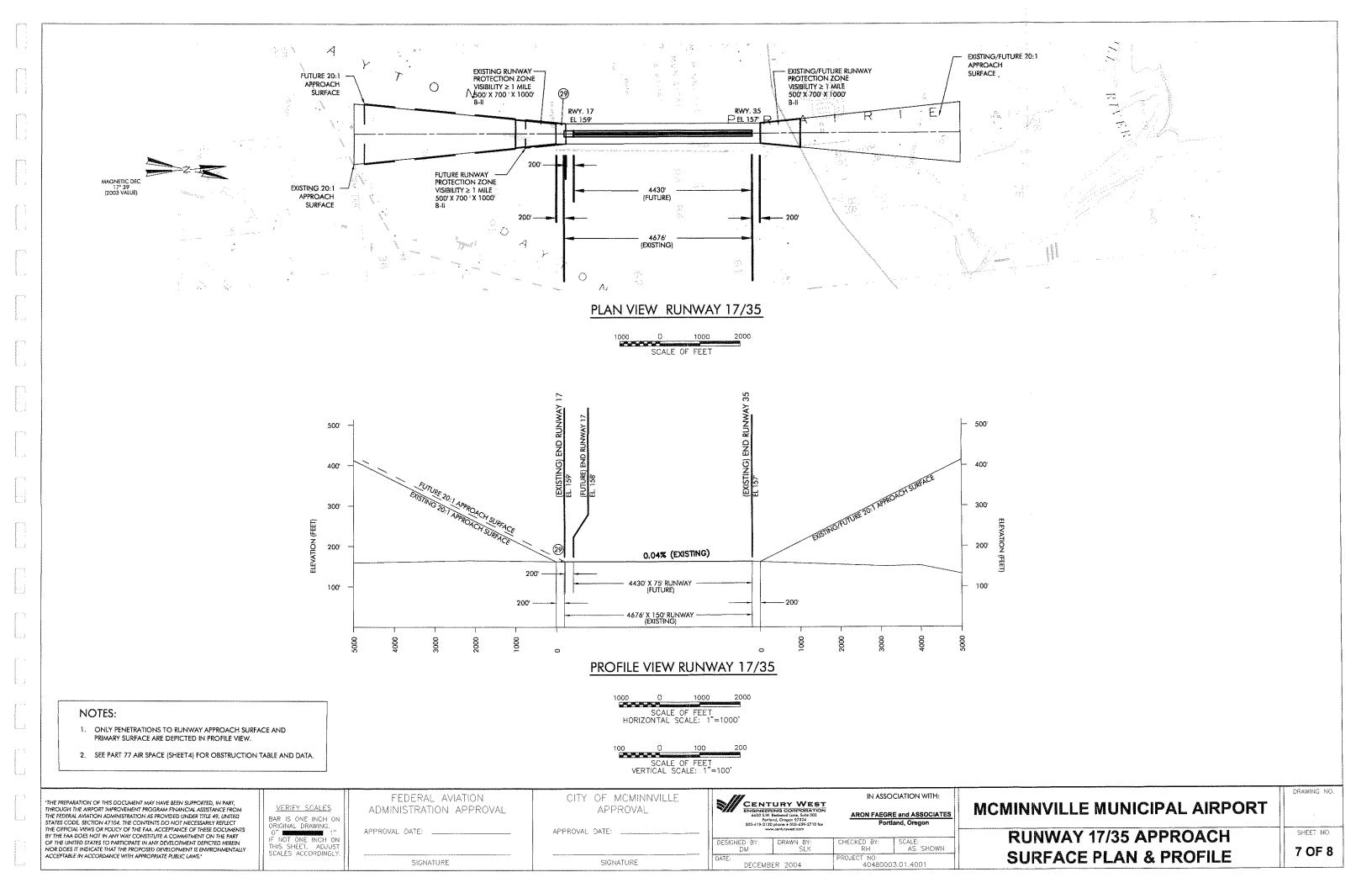
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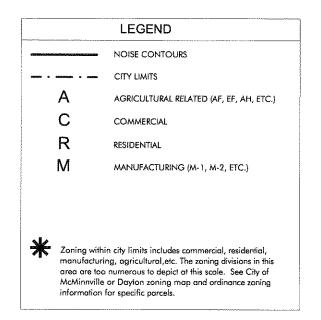
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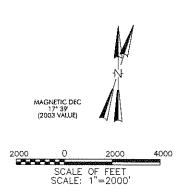
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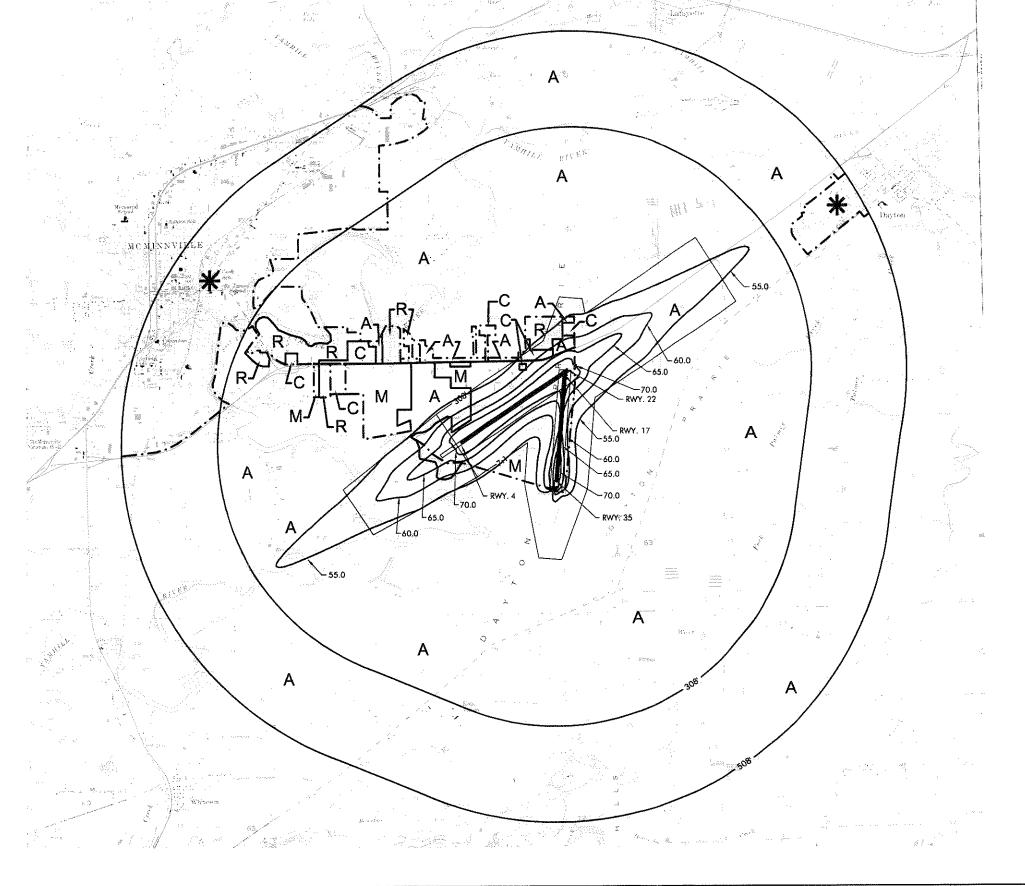












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VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING.

1"

THIS SHEET, ADJUST SCALES ACCORDINGLY FEDERAL AVIATION ADMINISTRATION APPROVAL

APPROVAL DATE:

SIGNATURE

CITY OF MCMINNVILLE
APPROVAL

APPROVAL DATE:

SIGNATURE

CENTURY WEST
ENDINÉERING CORPORATION
650 S.W. Bedwood Lump, Suide 300
650 S.V. Sedwood Lump, Suide

DECEMBER 2004

IN ASSOCIATION WITH:

ARON FAEGRE and ASSOCIATES
Portland, Oregon

MCMINNVILLE MUNICIPAL AIRPORT

LAND USE PLAN
WITH 2022 NOISE CONTOURS

DRAWING NO.

SHEET NO.

8 OF 8